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IDEA-0478

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21 September 1961

MEMORANDUM FOR: Acting Chief, DPD-DD/P

SUBJECT : Navigational Radio Equipment for  
IDEALIST Aircraft

REFERENCE : Memorandum to the Chief, Materiel Staff,  
from the Chief, Special Projects Branch,  
dated 9 August 1961; Subject as above

1. This memorandum contains a recommendation on the installation of improved navigational radio equipment in all IDEALIST aircraft. Such recommendation is included in paragraph 8.

2. As requested in the above referenced memorandum, we have explored the feasibility of installing the following radio equipment as replacement for the ARN-6 ADF in U-2 aircraft:

- a. TACAN/ADF
- b. VORTAC/ADF
- c. VOR/ADF

3. TACAN/ADF

a. This equipment can be installed in all aircraft. It can be installed permanently in aircraft which do not have SSB. In those aircraft equipped with SSB, the TACAN portion would have to be installed in space forward of the SSB which is now reserved for alternate installation of System VI equipment when System VII is installed. The TACAN equipment would be easily removable if it becomes necessary to use this space for System VI. The ADF portion would remain permanently installed.

b. In aircraft without SSB, the substitution of TACAN/ADF for the ARN-6 will result in a weight increase of about 71 pounds. In aircraft with SSB, the weight increase will be about 110 pounds.

c. The procurement lead time for TACAN equipment is about one year. This might be reduced to 6 months if a special Air Force priority can be obtained.

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d. The estimated cost for installation of TACAN/ADF equipment is as follows:

- (1) Develop, install and flight test prototype
- (2) Provide seven TACAN production kits for field installation at  each
- (3) Provide four ADF production kits for field installation at  each
- (4) Provide eight RMI converter kits for field installation at  each

TOTAL

25X1

#### 4. VORTAC/ADF

The installation of this combination is not technically feasible.

#### 5. VOR/ADF

a. This combination can be installed in all aircraft. No space problem exists as with TACAN equipment.

b. A weight savings of about 11 pounds will result by replacing the existing ARN-6 ADF with ARN-59 ADF and ARC/157 VOR equipment. Aircraft equipped with SSB will require only the VOR portion and will sustain a net increase in weight of about 28 pounds.

c. The procurement lead time for VOR equipment is about 60 days.

d. The estimated cost for installing VOR/ADF equipment is as follows:

- (1) Provide eight VOR production kits for field installation at  each

25X1

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(2) Provide four ADF production kits for field installation at  each

(3) Provide eight RMI convertor kits for field installation at  each

TOTAL



6. A summary of the comparative cost/weight/delivery factors for each type equipment is as follows:

	TOTAL COST	WEIGHT		LEAD TIME
		Acft w/SSB	Acft w/o SSB	
TACAN/ADF	<input type="text"/>	+110 lbs	+71 lbs	1 year
VOR/ADF	<input type="text"/>	+ 28 lbs	-11 lbs	60 days

7. Funds are available under LAC Contract SP-1922 to finance the cost of VOR/ADF equipment. An Activity Program would have to be submitted to obtain funds required for the TACAN/ADF installation.

8. In view of the lighter weight and cheaper cost of the VOR/ADF package, it is recommended that this equipment be installed in all IDEALIST aircraft.

/s/

Deputy for Special Projects  
Material Staff, DPD-DD/P

CONCURRENCE:

/s/  
\_\_\_\_\_  
Chief, Special Projects Branch

/s/  
\_\_\_\_\_  
Chief, Communications Staff

Recommendation contained in paragraph 8 is approved:

(Signed) Stanley W. Beerli 22 SEP 1961

Approved For Release 2006/01/30 : CIA-RDP63-00313A000600080017-0

STANLEY W. BEERLI  
Acting Chief, DPD-DD/P

ILLEGIB



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